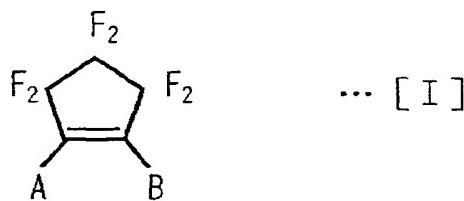
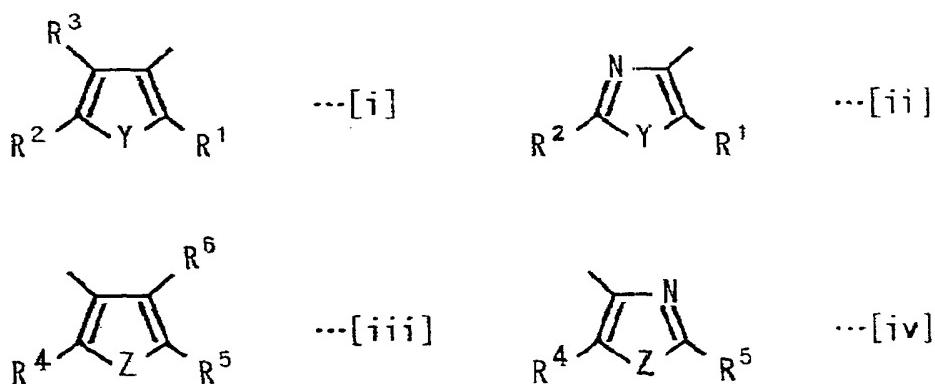


WHAT WE CLAIM IS:

1. A photochromic material comprising a compound,  
belonging to the diheteroarylethene class, represented by the  
5 following general formula [I]:



wherein, in the general formula [I], A represents the  
10 following substituents [i] or [ii], and B represents the  
following substituents [iii] or [iv];



wherein, in the substituents [i] and [ii], R<sup>1</sup> represents an alkoxy group, R<sup>2</sup> represents -Q-Ar, Q representing a direct bond or an arbitrary divalent group and Ar representing an aromatic hydrocarbon ring or an aromatic heterocycle which are optionally substituted, R<sup>3</sup> represents a hydrogen atom, an alkyl group, an alkoxy group, a halogen atom, a fluoroalkyl group, a cyano group, or an aryl group which is optionally substituted, and Y represents -O- or -S-; and

10 in the substituents [iii] and [iv], R<sup>4</sup> represents an alkoxy group, R<sup>5</sup> represents -Q-Ar, Q representing a direct bond or an arbitrary divalent group and Ar representing an aromatic hydrocarbon ring or an aromatic heterocycle which are optionally substituted, R<sup>6</sup> represents a hydrogen atom, an alkyl group, an alkoxy group, a halogen atom, a fluoroalkyl group, a cyano group, or an aryl group which is optionally substituted, and Z represents -O- or -S-.

2. A photochromic material as claimed in claim 1, wherein the ring opening quantum yield is 10<sup>-3</sup> or lower.

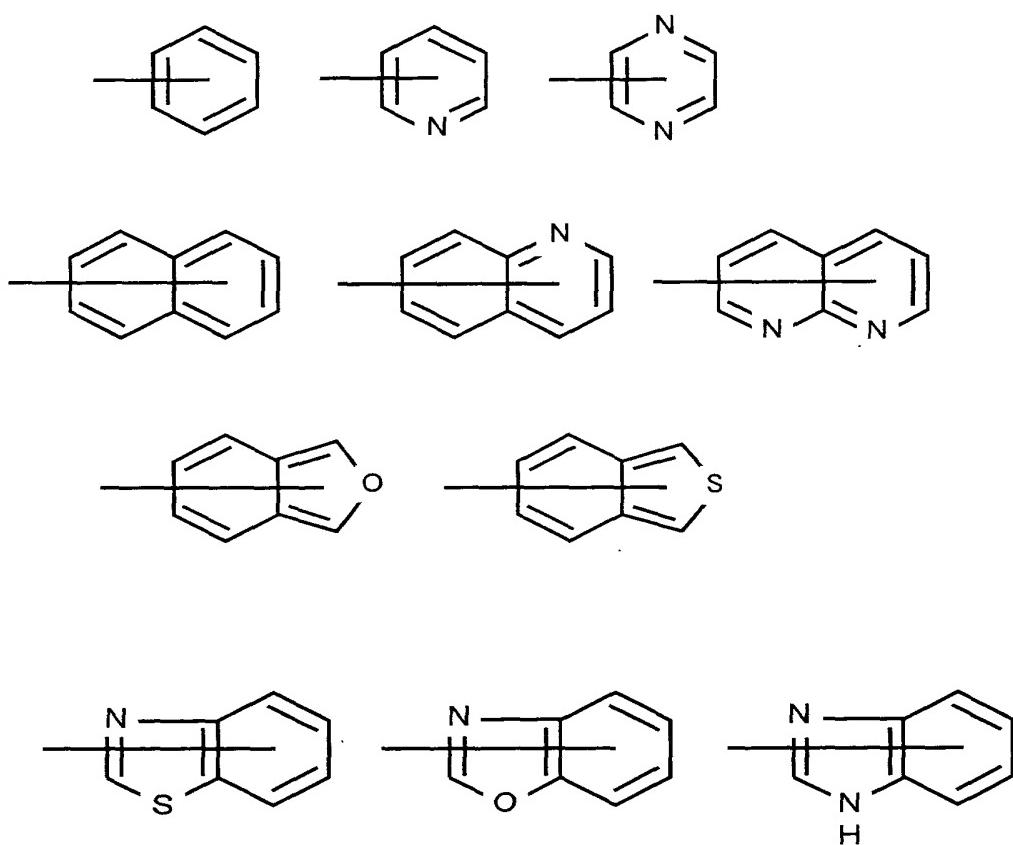
20 3. A photochromic material as claimed in claim 1 or 2, wherein R<sup>1</sup> and R<sup>4</sup> in the substituents [i]-[iv] of said general formula [I] each comprise independently an alkoxy group having 1-3 carbon atoms.

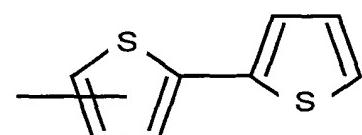
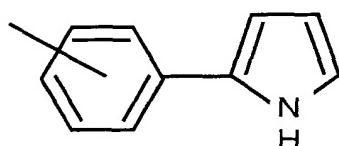
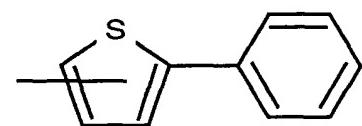
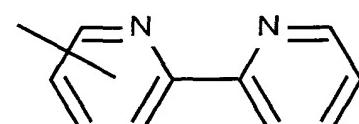
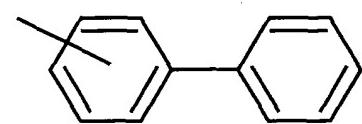
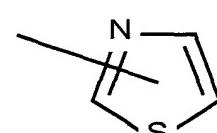
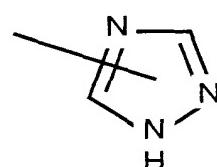
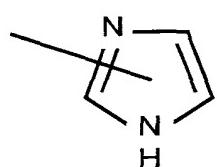
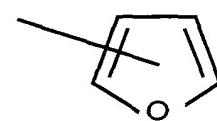
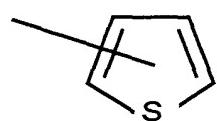
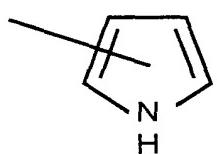
25 4. A photochromic material as claimed in claim 3, wherein R<sup>1</sup> and R<sup>4</sup> each comprise a methoxy group.

5. A photochromic material described in anyone of claims 1-4 wherein Q in Q-Ar corresponding to R<sup>2</sup> and R<sup>5</sup> in the substituents [i]-[iv] of said general formula [I] each

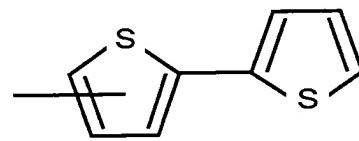
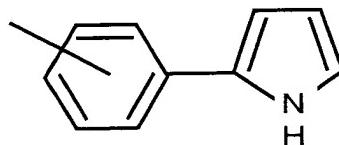
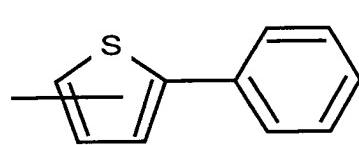
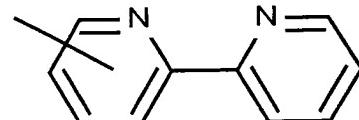
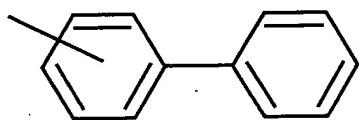
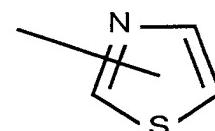
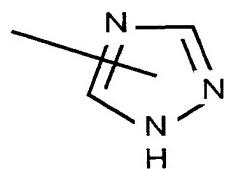
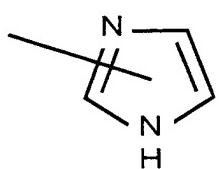
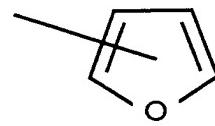
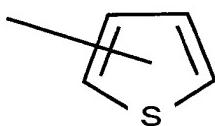
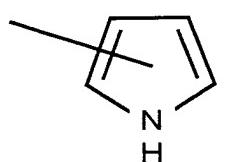
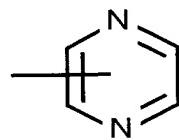
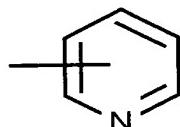
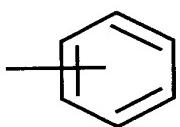
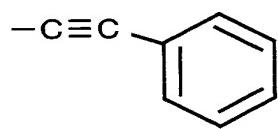
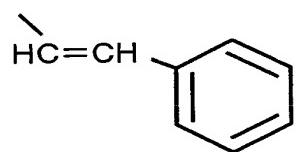
comprise independently a direct bond,  $-(-CH=CH-)_n-$  (i.e. a polyethylene group) (wherein  $n = 1-5$ ), or  $-(-C''C-)_n-$  (i.e. a polyacetylene group) (wherein  $n = 1-5$ ), whereby Ar comprises a single 5- or 6-member ring, or two or three 5- or 6-member  
5 rings directly bonded or condensed, each of said rings being optionally substituted.

6. A photochromic material as claimed in claim 5,  
wherein Ar in Q-Ar corresponding to R<sup>2</sup> and R<sup>5</sup> is selected  
independently from the group consisting of the following  
10 formulae:





7. A photochromic material as claimed in claim 6,  
wherein R<sup>2</sup> and R<sup>5</sup> are each selected independently from the  
5 group consisting of the following formulae:



8. A photochromic material described in any one of claims 1 through 7, wherein R<sup>3</sup> and R<sup>6</sup> each comprise independently a linear alkyl group.

9. A photochromic material described in any one of 5 claims 1 through 8, wherein the photochromic material comprises a compound, belonging to the diheteroarylethene class, selected from the group consisting of the following formulae:

